ABSTRACT

The Great Pond Diagnostic/Feasibility Study presents more than fourteen months of limnological data and discusses spatial and temporal water quality trends. The diagnostic data was used to determine feasible and cost-effective means for watershed management and possible lake restoration.

The Great Pond Clean Lakes Study accomplished each of the objectives defined in the work plan. The following tasks were completed during the study and research phases of this project:

1. Identified the historical and existing water quality of Great Pond;

2. Identified the present water quality of Great Pond's inflowing tributaries and outlet;

3. Developed hydrological and phosphorus budgets for Great Pond;

4. Documented several sources of phosphorus to the pond;

5. Identified the importance of the lake's sediments to supply internal phosphorus loading to the pond;

6. Compared several trophic models that classified Great Pond as borderline mesotrophic/eutrophic;

7. Reviewed many non-point sources of phosphorus to the pond;

8. Developed a feasible, cost-effective plan of actions for watershed management;

9. Recommended non-point source Best Management Practices that will help protect the pond for future generations;

10. Developed an education program for the Town of Kingston and the transient pond users;

11. Reviewed current lake restoration techniques and researched the feasibility of each method's potential for restoration success; and

12. Developed a time table in which each recommendation may be achieved.

The results and recommendations of the Great Pond Diagnostic/Feasibility Study provide a basis for lake protection through watershed management. The use of lake restoration techniques is possible only after the non-point sources of phosphorus to the pond have been managed.

Although this project was successful in accomplishing its goals, only upon the implementation of a watershed management program, which includes phosphorus reduction, will this project be considered a complete success. Project coordinators must now obtain the necessary funds to implement the project's recommendations. The town, the lake association and the many volunteers must continue to be involved in any efforts to protect Great Pond.